

# Karmel Stout

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- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **28**
- SRM **53.9**
- Style **American Stout**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.7 liter(s)**
- Total mash volume **15.6 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**

## Mash step by step

- Heat up **11.7 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **7.4 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

## Fermentables

| Type  | Name                 | Amount         | Yield | EBC  |
|-------|----------------------|----------------|-------|------|
| Grain | Strzegom Karmel 300  | 1 kg (25.6%)   | 70 %  | 299  |
| Grain | Bestmalz Red Active  | 2 kg (51.3%)   | 79 %  | 30   |
| Grain | Chocolate Rye optima | 0.2 kg (5.1%)  | 20 %  | 1300 |
| Grain | Jęczmień palony      | 0.2 kg (5.1%)  | 55 %  | 985  |
| Grain | Barley, Flaked       | 0.5 kg (12.8%) | 70 %  | 4    |

## Hops

| Use for | Name  | Amount | Time   | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil    | lunga | 15 g   | 60 min | 11 %       |